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The Mechanical Behavior of Electromagnetic Solid Continua

Proceedings of the IUTAM-IUPAP Symposium held in Paris, France, 4–7 July, 1983

Edited by **G.A. Maugin,** Laboratoire de Mécanique Théorique Associé au C.N.R.S., Université Pierre et Marie Curie, Paris, France

This work discusses the various mechanical behaviors of electromagnetic deformable solids and electromagnetic-mechanical interactions, their modelling and their applications to statical and dynamical problems, and to engineering devices.

Main features:
- up-to-date material;
- cross-disciplinary approach;
- rigorous review treatment of many problems.

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Database Management in Science and Technology

A CODATA Sourcebook on the Use of Computers in Data Activities

edited by JOHN R. RUMBLE, Jr., *National Bureau of Standards, Washington, DC, U.S.A. and* VIKTOR E. HAMPEL, *Lawrence Livermore National Laboratory, Livermore, CA, U.S.A.*

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This book is designed as an introduction for scientists and engineers into the use of computers to store, manipulate, and distribute collections of numeric data. The basic theme is simple: think before doing. Stated another way, successful computer database projects first require careful plans and designs followed by rational selection and implementation. This work introduces to people interested in scientific data, the important and useful concepts developed over the past decade to control computer data projects and improve the chances of success. A major feature is the clear introduction of important database management concepts and ideas, which is combined with extensive annotated bibliographies. The chapters, each written by an expert in scientific database management, cover three main topics. First, an overview of the concepts is given; then a detailed discussion of each phase of a database project follows; and finally, the book concludes with a discussion on computer communications and linkage to other scientific database work.

This sourcebook is also designed to be a succinct, yet clear reference manual to the topical literature in database management in general, made specific to the requirements of, and use with, data in science and technology. Intended as a primer, the volume is an introduction to scientists and engineers who are interested in the use of computers in data activities. It is a book by experts for newcomers in the database field.

CONTENTS: Foreword. **Chapters. 1:** Data, Computers and Database Management Systems *(J.R. Rumble, Jr.);* **2:** Data Types and Structures in Science and Technology *(A.A. Brooks);* **3:** Database Management Systems in Science and Technology *(F.D. Gault);* **4.** Analysis and Display of Data in Science and Technology *(J.R. Rumble, Jr., and N.L. Seidenman);* **5:** Planning for Database Management in Science and Technology *(F.J. Smith);* **6:** Designing the Database Management System *(H. Bestougeff);* **7:** Selecting a Suitable Database Management System *(M.A. Huffenberger and C.A. Schermer);* **8:** Implementing and Using the Database Management System *(J. Russell and D.E. Cullen);* **9:** Integrating Your System with Data Communication Networks and to Other Database Activities *(J.R.U. Page);* **10:** Database Management Concerns at the International Level *(C. Gottschalk).*

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